Summary

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It's a Hurdle

- **VBA developers think "I've never used classes. Why now?"**
- **Using classes (and objects) allows you to create applications that are too difficult or unmaintainable otherwise**
- **All about defining members of the class**
  - Properties, methods, events
- **And then creating instances of the class (objects)**
- **Start small—convert self-contained behavior to classes**

Specific Syntax

- **Use of the Set keyword is never optional**
- **If modifying a value, simply use equals sign to assign value the right to variable on the left**
- **If modifying a reference to an object**
  - Must use the Set keyword as part of the statement
- **Set variable to special keyword Nothing to release the reference**
- **Local variables always set to Nothing automatically when they go out of scope**
  - Can explicitly set to Nothing when needed

Dealing with Class Issues

- **Use custom collection classes to wrap up the built-in Collection class**
  - Extend the class with your own behavior
  - Ensure nothing gets into the collection besides one specific type
- **Watch out for orphan objects**
  - If there's no public reference left, you can't destroy it
  - Memory issues difficult to debug and handle
  - Make sure you specifically clean up circular references
- **Create custom events to extend the functionality of classes**
  - Think of use cases where it would be useful to have user code interrupt class processing
  - Don't ever block an event handler!

Use Dynamic Data Structures

- **Any time you want to manipulate data in memory**
  - Generally easier to create your own data structure than to use built-in Array or Collection
  - Built-in classes provide no mechanism for controlling the insertion and deletion of items
- **Dynamic data structures based on the concept of a class that includes data, plus a reference to at least one more instance of the same class**
- **Covered stacks, queues, and linked lists here**
  - Binary trees and hash tables two other good uses
  - Worth investigating

Take the Plunge

- **Even if you've never used classes…**
  - Look for opportunities
  - Think about entities/"things" in your application
- **Create classes that describe discrete entities**
- **Create data structures to contain the entities**
- **Think about what you're doing!**